

Work Order ID 148590

148590

Page 1

Tuesday, July 05, 2016 3:09:19 PM

Item ID: D2574 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Saddle, Aft, In
 Start Date: 7/8/2016 Start Qty: 6.00 *6* Cust Item ID:
 Required Date: 7/20/2016 Req'd Qty: 6.00 *6* Customer:
 Reference:

Approvals: Process Plan: DAS Date: JUL 12 2016 Tooling: Date: Run Start *NR1*
 QC: 21 Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2574	F								

100 0.02
 100 HAAS CNC VERTICAL MACHINING #1
 HAAS 1
 HAAS CNC vertical machine #1
 Memo 0.37
 Program Batch No. 148590
 Double check by: 33 16/07/19
 1-Machine Step No 1 per Folio FA051 and inspect per attached Dimension Sheets
 2-Machine Step No 2 per Folio FA051 and inspect per attached Dimension Sheets
 3-Machine Step No 3 per Folio FA051 and insp
 DAS 20 9-89 16-07-19
 DAS 44 9-89 16-07-20
 DAS 08 9-89
 110 0.00
 110 CONVENTIONAL MILLING MACHINE
 Mill Conv
 Conventional Milling Machine
 Memo 0.03
 Machine keyway as per dwg D2573 & D2574
 DAS 44 9-89 16-07-20
 DAS 08 9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : _____							

1485.90

Tuesday, July 05, 2016 3:09:19 PM

N900040100

Setup Start *NS1*

Stop *NS2*

6

Cust Item ID:

6

Customer:

Reference:

Run Start *NR1*

Approvals: _____ **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop *NR2*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

**Insp.
Stamp**

A. 16/07/21

DAS
08
9-89

Le

Q

DAS
44
9-69

120

OC

Memo

0.01

Quality Control

0.00

130

QC

Memo

0.02

Quality Control

6

C

DAS
49
9-89

16/07/26

0.00

140

HandFinish

Memo

0.03

Hand Finishing

6

DAS
34
2016/07/26

БЕБ

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

Work Order ID 148590

148590

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Tuesday, July 05, 2016 3:09:19 PM

Item ID: D2574 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Saddle, Aft, In
 Start Date: 7/8/2016 Start Qty: 6.00 ***6*** Cust Item ID:
 Required Date: 7/20/2016 Req'd Qty: 6.00 ***6*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150 *150* Powdercoat Powder Coating	White Gloss(Ref:4.3.5.1) per OS1005 4.3-Alum <i>m 134798</i> Memo START TIME: <u>3:40</u> OVEN TEMPERATURE: <u>320°</u> FINISH TIME: <u>4:10</u>	0.00 0.02				<u>6</u>	<u>0</u>	<u>16-07-28</u>	<i>DAS 34 9-89</i>
160 *160* QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.01				<u>6</u>			<i>DAS 38 9-89 JUL 2 9 2016</i>
170 *170* Packaging Packaging	Identify as per dwg & Stock Location: <u>51358</u> Memo	0.00 0.01				<u>6</u>	<u>PC</u>		<i>910Z JUL 10 2016</i>

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

Work Order ID 148590

Tuesday, July 05, 2016 3:09:19 PM

148590

Page 4

Item ID: D2574

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Saddle, Aft, In

Start Date: 7/8/2016 Start Qty: 6.00

6

Cust Item ID:

Required Date: 7/20/2016 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180	QC21- Final Inspection - Work Order Release	0.00							
180									
QC	Memo	0.10							
Quality Control									

[Signature] **16/08/03**

**DAS
21
8-89****AUG 02 2016**

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval																																																									
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER :			
Misidentified ☐	Past Due ☐																																																																

Picklist Print

Tuesday, July 05, 2016 3:09:18 PM

Page 1

Work Order ID: 148590

148590

Parent Item: D2574

D2574

Parent Item Name: Saddle, Aft, In

Start Date: 7/8/2016

Required Date: 7/20/2016

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP Rev: I As Per RevE 06-01-27 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6101-005 *D6101-005* Saddle Billet		Manufactured	No			110	Each	36.0000	1	6		DAS 20 9-89	16-07-19
									**	6			

Location

Loc Qty

Loc Code

MAT040

16

146278

16

MAT041

20

147082

20

147 755

6

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

DART AEROSPACE LTD	Work Order: 178590
Description: Saddle, Aft Inboard	Part Number: D2574
Inspection Dwg: D2574 Rev. F	Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2574 Rev. E and record below:

				Recorded Actual Dimensions					
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	By	Date
A	0.438	0.443		.438	.438	.438	.438		
B	1.745	1.755		1.750	1.750	1.750	1.750		
C	3.495	3.505		3.500	3.500	3.500	3.500		
D	1.745	1.755		1.750	1.750	1.750	1.750		
E	7.990	8.010		8.000	8.000	8.000	8.000		
F	0.490	0.510		.500	0.496	0.498	0.494		
G	0.257	0.262		.258	.258	.258	.258		
H	0.375	0.380		.375	.375	.375	.375		
I	0.490	0.510		.502	0.500	0.500	0.500		
J	1.174	1.184		1.179	1.179	1.179	1.179		
K	0.558	0.578		.569	0.569	0.569	0.569		
L	1.174	1.184		1.179	1.179	1.179	1.179		
M	1.365	1.375		1.370	1.370	1.370	1.370		
N	2.495	2.505		2.500	2.500	2.500	2.500		
O	4.119	4.129		4.124	4.124	4.124	4.124		
P	0.115	0.135		.135	.135	.135	.135		
Q	0.115	0.135		.125	0.125	0.125	0.125		
R	0.240	0.260		.249	0.248	0.248	0.248		
S	0.115	0.135		.128	0.128	0.128	0.128		
T	0.178	0.198		.188	.188	.188	.188		
U	3.210	3.250		3.229	3.230	3.230	3.230		
V	0.230	0.250		.241	0.241	0.240	0.241		
W	0.115	0.135		.125	0.124	0.124	0.124		
X	0.307	0.312		.311	0.311	0.311	0.311		
Y	0.760	0.765		.760	0.760	0.760	0.760		
Z	0.352	0.372		.364	0.363	0.364	0.364		
AA	0.470	0.530		.500	.500	.500	.500		
AB	0.615	0.635		.625	0.625	0.625	0.625		
AC	0.053	0.073		.063	.063	.063	.063		
AD	0.240	0.260		.251	0.250	0.249	0.250		
AE	1.500	1.520		1.511	1.511	1.510	1.510		
AF	0.115	0.135		.135	.135	.135	.135		
AG	0.240	0.280		.265	.265	.265	.265		
AH	0.240	0.260		.247	0.248	0.248	0.248		
AI	2.000	2.020		2.001	2.001	2.000	2.000		
AJ	0.023	0.043		.033	.033	.033	.033		
Accept/Reject								DAS	

Measured by: FK	DAS
Date: 16-07-20	08
	9-89

Audited by: 9-89
Date: 16/07/26

Rev	Date	Change	Revised by	Approved
B	02.09.27	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	
F	13.03.07	Dwg Rev updated	KJ	

DART AEROSPACE LTD	Work Order: 148590
Description: Saddle, Aft Inboard	Part Number: D2574
Inspection Dwg: D2574 Rev. F	Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2574 Rev. E and record below:

				Recorded Actual Dimensions				By	Date
Dim	Min	Max	Go/No Go Gauge	1/16	1/8	3/16	1/2		
A	0.438	0.443		0.438	0.438				
B	1.745	1.755		1.750	1.750				
C	3.495	3.505		3.500	3.500				
D	1.745	1.755		1.750	1.750				
E	7.990	8.010		8.000	8.000				
F	0.490	0.510		0.499	0.500				
G	0.257	0.262		0.258	0.258				
H	0.375	0.380		0.376	0.376				
I	0.490	0.510		0.500	0.500				
J	1.174	1.184		1.179	1.179				
K	0.558	0.578		0.569	0.569				
L	1.174	1.184		1.179	1.179				
M	1.365	1.375		1.370	1.370				
N	2.495	2.505		2.500	2.500				
O	4.119	4.129		4.124	4.124				
P	0.115	0.135		0.135	0.135				
Q	0.115	0.135		0.125	0.125				
R	0.240	0.260		0.248	0.248				
S	0.115	0.135		0.128	0.128				
T	0.178	0.198		0.188	0.188				
U	3.210	3.250		3.230	3.230				
V	0.230	0.250		0.240	0.240				
W	0.115	0.135		0.124	0.124				
X	0.307	0.312		0.311	0.311				
Y	0.760	0.765		0.760	0.760				
Z	0.352	0.372		0.364	0.364				
AA	0.470	0.530		0.500	0.500				
AB	0.615	0.635		0.625	0.625				
AC	0.053	0.073		0.063	0.063				
AD	0.240	0.260		0.248	0.249				
AE	1.500	1.520		1.510	1.510				
AF	0.115	0.135		0.135	0.135				
AG	0.240	0.280		0.265	0.265				
AH	0.240	0.260		0.248	0.248				
AI	2.000	2.020		2.000	2.000				
AJ	0.023	0.043		0.033	0.033				
Accept/Reject									

Measured by: A. C.	DAS
Date: 16/07/21	08
	9-89

Audited by: 49	DAS
Date: 16/07/26	9-89

Rev	Date	Change	Revised by	Approved
B	02.09.27	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	
F	13.03.07	Dwg Rev updated	KJ	

